

**Town of La Pointe
Alternative Energy Committee
September 17, 2015**

Members present: Larry Bean, Chair; Tom Banner, Glenn Carlson, Marty Curry and Zach Montagne
Members absent: Carl Frederickson
Town Staff present:
Public present:

1. Call to order.

Larry Bean, Chair called the Alternative Energy Committee meeting to order on Thursday, September 17, 2015 at 10:10am. A quorum of the committee is present as shown above.

2. Welcome new members.

Welcome Zach and Marty, our new members, to the committee.

A letter of resignation dated 9/8/2015 has been received from Burke Henry. The minutes should reflect our pleasure with Burke's service over the past eight years and how he has reflected the work we are doing to the citizenry of Madeline Island. He will be missed.

With Burke's retirement there is a vacancy for Vice Chair. Larry will be leaving soon so the committee will need someone here in a leadership role rather than available by phone. Larry has met with Steve Dunn, Building and Grounds Manager at the Bayfield School and Steve would like Larry to meet with the Building & Grounds Committee. Dave Aslyn, Superintendant of the Bayfield School would like a presentation to the School Board in regards to the Library/Clinic and possibly the School solar project.

Glenn said he would be happy to serve as an informal vice chair but he is already on several boards and committees and is at his limit. He would not be able to attend meetings with the Bayfield School, but Marty would be up to speed and would be a good representative.

Tom Banner asked about Tom Lindner. Larry said he received an email in regards to the AEC meeting on the 17th but he has not heard back.

3. Review and approval of minutes.

A. August 27, 2015.

Motion by Glenn to approve the August 27, 2015 AEC meeting minutes as presented, second, Tom. Discussion.

In regards to wood gasification at the Emergency Services building, is the Madeline Island Wilderness Preserve (MIWP) required to do select harvesting of their forest. Marty talked to a MIWP board member who said there is a RFP for selective harvesting. Larry talked to a board member about using the wood on MIWP land but no one has followed up.

If there is not enough good wood to be found on the Island, a full cord costs \$90.00 from the mainland. A full cord would produce about \$175.00 worth of electricity.

A committee member needs to attend the MIWP presentation in October on forest management.

Discussion of agenda item #8: solar garden. The minutes say if we put a solar garden in anyone can subscribe; the next sentence said this is not how solar gardens operate.

Larry said Xcel put out a Request for Proposals (RFP): Xcel will support the development of 3 megawatts of solar gardens in northern WI. The RFP was of interest to this committee because the electricity from a solar garden would be available to residents and the town. More research however, showed that Xcel did not want to make the grant to a community, but to developers. Xcel would enter into a power purchase contract with the developer which means everyone would eventually pay the developer. (The Town would not be considered a developer in this

project). Xcel would begin soliciting subscriptions in October but Xcel would not say what the subscription cost would be so there was no way to figure out the value. Larry suggested the committee write to Deb Erwin, Xcel, Manager of Regulatory Policy or Dave Donovan who has temporarily taken Deb's place expressing our interest in a solar garden that works the way we want the garden to work.

Larry said he would like solar but he does not want to cut a large amount of trees on his land but he could pay for a subscription and use the solar garden. As an example, if you subscribe for 10kWh and use 8 kWh of electricity you would be paid for the 2 kWh you did not use at the current rate of 7.5cents/kWh which you are currently being charged 12 cents. This means you would get a 60-70% reduction in your electric cost. The Xcel RFP for solar gardens did not work that way and that is why we did not participate. The Town and Madeline Sanitary District could be subscribers for the electric use not covered by the future solar array project.

Larry said he called a few developers but they had enough sites. The deadline for the RFP was August 28th.

Larry said a solar garden would be allowed at the airport. There are 25 people who have solar interests and various businesses who would like to subscribe. We could put in a 500 or 700 kW system. The Xcel RFP did not limit subscriptions – subscriptions could come from anywhere on the mainland - but we want all our subscriptions to come from the Island.

Question if there is an approximate footprint of the various arrays. Larry said the Library/Clinic site would double if we added the school. The efficiency of collectors will not increase dramatically; the real change is in the batteries. Zach said there are photovoltaic shingles on the market, also. Larry said the contractor who wrote the summary report is the vendor for the Ten-K collector.

Glenn said in regards to efficiency, with net metering there is high likelihood that we could offset the Town government electric cost to zero so we would get back the lesser of the 100kWh limit on that. We would not get a refund so if we generate 100kWh off these arrays but the Town's overall bill is 90kWh we are only going to get 90kWh even though we are potentially generating more back to the grid. That is where efficiencies come in. If we are way over 100kWh as a municipality it might be that we could get our electric use down enough to offset the entire electric bill and not just the first 100kWh. Larry said you would get a credit and you could use the whole credit or just half. The half would then be carried forward for the next month, so in summer you would produce a fair amount of electricity and could be carried forward. To be noted is that the Island's electric load is level which is highly unusual. Another note is that it takes 3kW to produce the 1kWh you use: 1kW to produce the kWh, 1 kW to transmit that kWh, and 1kWh to use so if you save 1kWh you are actually saving 3kWh. The most efficient way to use power is to produce it where you use it. Then there is no loss.

Question of what the loss would be with a solar garden. Larry said the excess goes back into the grid.

The way the committee sees the project is in three pieces: (1) MRF, Emergency Services, Winter Transportation; (2) Library/Clinic/School; (3) Town Hall. These are stand alone systems, so there is no need to bore, trenching would be used. Zach said boring could be less expensive because the DNR can raise issues about an open trench. Larry said this would be up to the bidders.

Zach said it should be noted in regards to error on the size of generators on page 3 of the IPERC (Intelligent Power & Energy Research Corporation) Report it should be noted that the Madeline Sanitary District has a 50kW generator. The 50kW generator also needs to be added to the minutes.

All in favor to the motion on the floor to approve the August 27, 2015 AEC minutes with the inclusion of the 50kW generator at Madeline Sanitary District, all aye. Motion carried.

4. Public comment.

No public present.

5. Review of Town Board action and comments.

Larry attended the September 8, 2015 Town Board meeting and updated the Town Board as to the progress of a solar installation on the Island. Larry talked about the three pieces of the project: The Library/Clinic/and possibly the School; MRF, Emergency Services and Winter Transportation; Town Hall. The Town Board asked what the AEC considered a priority. Larry thought the Library/Clinic and School.

6. Discussion of project strategy.

There is a limited grant list which includes the EPA, Dept of Energy, USDA, the State and Xcel. Larry suggested we ask for funding for all three pieces of the project. The gasifier would be next and the last phase would be a microgrid. A microgrid basically connects all the solar arrays and is an easy way to disconnect from the grid and allow us to actually use the electricity we are generating but the additional cost to install a microgrid makes a microgrid less of a priority. The Other reasons are - the Island has reasonably priced electricity and Xcel has been extremely reliable. Lauren Azar, former public utility commission ~~chair~~ *member* and former policy advisor to the Secretary of Energy Chu brought the microgrid to our attention. She said we would be an ideal demonstration site. Lauren is now in private practice in Madison.

Larry said the committee needs a resolution from the Town Board formalizing their support for the work the AEC is doing. Larry drew up a draft resolution and the Town Board asked that he and Lisa Potswald, Interim Town Administrator put the resolution together.

The draft resolution is as follows: The Town Board of La Pointe, WI, explicitly supports the Town's Alternative Energy Committee (AEC) current work objectives of: 1) reducing electricity costs for island residents via sustainable on-island energy production and 2) lowering the Town carbon footprint. The Town Board specifically supports the AEC's efforts to develop and implement a plan for the acquisition of solar energy installations that would supplant the electricity used for municipal operations. This includes the inclusion of Bayfield School District's La Pointe School."

Motion by Tom to adopt the resolution, second, Zach. Discussion.

Question if costs should be included in the resolution. Larry said the Board asked if the AEC was asking for a commitment and Larry said no.

All in favor, all aye, motion carried. The resolution will now go to Lisa for proper form.

Steve Dunn, Building Operations Manager at the Bayfield School said the School is supportive. The School already has some solar in place. The west side parking lot lights are all self-contained LEDs, very cost saving. Each pole has one photovoltaic panel with a battery box at the bottom. There are no wires. Larry said a light like this could replace the defunct light at the end of the ferry dock. To fix this light the concrete would have to be dug up so this self-contained light might be the answer. The next step at the School is to meet with Building and Grounds. Those meetings start at 7:30am.

7. Next steps.

Meetings in Madison: The State Energy Office has moved into the Public Utility Commission building. We need to talk to the Public Utility Commission about the 100kW limit – is that limit per customer or per meter? Xcel wants it per customer; the public utility commission said it is per meter. This is important because now we are under 100kW but if we add the gasifier we would be over. Need to touch base with the DNR.

Xcel is now located in Eau Claire. Need to talk to them about the solar garden.

Budget: \$10,000 was used for the solar study. We did solar site assessments at \$150/site and we paid for 1 trip to Madison for 2 people. Right now there is \$800 left in budget.

Larry would like to find out from the State Energy Office what we would need for a match.

Glenn said the Town might consider financing the approximate \$400,000 solar array project if there is a 12-16 year payback. If the equipment lasts 25 years then there would 9 years of free electric use. There is also renewable energy bonding grants available to Towns.

Larry said the Town Board asked about maintenance costs. There is very little maintenance; the only exception would be snow. The racking system would have to be up high enough for the snow to slide completely off and the rack placed in such a way so snow could be removed. The arrays need to be rotated to track the sun. There are systems you can manually rotate, systems that rotate themselves summer and winter and expensive automatic tracker systems. Since our project will have several arrays, manual rotation might not be an option.

The majority of the cost of \$150,000 system for the Library/Clinic/School project would be about 50/50 (50 for cells and 50 for installation or 60/40 (60 for the cells/ 40 for installation).

Marty said this could be offset by people buying a memorial cell or panel, similar to a memorial bench. Larry said the subscription idea in the solar garden is similar.

Need to contact the State Energy Office about funding. Larry will contact not for profit groups.

Glenn suggested the School might be able to help. Marty has time to do grant research. Lisa, Interim Town Administrator, is also the grant writer.

Agreement to ask for \$2,000 in the budget for 2016. Larry will talk to Lisa about this.

Need to write to Dave Donovan about a solar garden that would serve the island. Cannot say the Town has agreed to do the garden, but can pose the question. Glenn does not want to take away from our project but is fine with writing the letter.

Motion by Glenn to ask Larry to draft a letter to Xcel regarding our solar garden interest, second, Tom. All in favor, all aye, motion carried.

8. Review of Town efficiency improvements.

The Committee made recommendations to the Town Board and staff on how to increase efficiency and they have responded. There is all new outdoor LED lighting, the Library put new insulation in the crawl space, a vestibule has been built for the Town Hall entrance and there is that big piece of Styrofoam in the corner for the door in this room for the winter. There is to be a lighting change at the MRF and at the dock.

9. Set next meeting and agenda.

Next meeting will be Thursday, October 1, 2015 at 10am at Town Hall.

Marty will look at grants. Larry will contact Megan Levy, [Director of Local Energy Programs](#), in the Wisconsin Energy Office.

10. Adjourn

Motion to adjourn by Marty, second, Glenn. All in favor, all aye motion carried.

Meeting adjourned at approximately 11:10am.

Minutes taken from recorder and respectfully submitted by Kathy Erickson, Clerical Assistant.

Minutes approved as corrected, corrected changes struck through; changes in italics

October 1, 2015